Abstract of the Disclosure

A transcoding apparatus and method between CELP-based codecs using bandwidth extension are provided. The transcoding apparatus between CELP-based codes using bandwidth extension comprises a formant parameter converter which extracts formant parameters in a narrowband CELP format from an input narrowband bitstream, and converts the extracted CELP format formant parameters into formant parameters in a wideband CELP format; an excitation signal parameter converter which converts excitation signal parameters in a narrowband CELP format of an input narrowband bitstream, into excitation signal parameters in a wideband CELP format; and a quantizer which quantizes the wideband CELP format formant parameters converted in the formant parameter converter and the wideband CELP formant excitation signal parameter converted in the excitation signal parameter converter, respectively, in an output CELP format. The transcoding apparatus can reduce degradation of voice quality, delay, and computational load, and by additionally generating information corresponding to the high band of wideband voice, enables high quality voice communications between networks having different bandwidths.